CLAIMS:

1. An electrical motor, comprising:

a housing;

a plurality of discs stacked within the housing to form a stator, the discs having slots that align with one another to form passages;

a tube of dielectric film inserted within each of the passages, each of the tubes defining a sealed outer margin; and

a plurality of windings inserted through each of the tubes.

2. The motor according to claim 1, wherein the dielectric film is nonmeltable.

3. The motor according to claim 1, wherein the dielectric film of each of the tubes is nonmeltable and is bonded to a carrier layer of a meltable material.

4. The motor according to claim 1, wherein the dielectric film of each of the tubes has overlapping edges and is bonded to a carrier layer of a thermoplastic material.

5. The motor according to claim 1, wherein the slots have side edges that are straight and outer edges that are curved, and wherein the tubes have portions that are substantially flush with the side edges and the outer edges.

6. The motor according to claim 1, wherein a wall thickness of the tube is in the range from .003 to .009 inch.

7. The motor according to claim 1, wherein each of the tubes has a cross-sectional area that is substantially equal to a cross-sectional area of each of the slots.

8. An electrical motor, comprising:

a housing;

a plurality of discs stacked within the housing to form a stator, the discs having slots that align with one another to form passages;

a tube inserted within each of the passages, each of the tubes having a layer of a dielectric film that has overlapping edges and which is bonded to a layer of a material that fuses to the dielectric film to form a continuous sidewall; and

a plurality of windings inserted through each of the tubes.

9. The motor according to claim 8, wherein each of the slots has two side portions that are straight and an outer edge portion that is curved, and wherein each of the tubes has straight portions that are substantially flush with the side portions, and a curved portion substantially flush with the outer edge portion.

10. The motor according to claim 8, wherein each of the tubes has a wall thickness in the range from .003 to .009 inch.

11. The motor according to claim 8, wherein each of the tubes has a circumference that is substantially equal to a perimeter of each of the slots.

12. The motor according to claim 8, wherein the dielectric film of the tube comprises polyimide.

13. A method of installing windings in a slot passage within stator discs of an electrical motor, comprising:

(a) providing a dielectric tube with a continuous circumferential wall;

(b) inserting the tube into the passage; then

(c) inserting windings into the tube.

14. The method according to claim 13, wherein step (a) comprises winding a layer of a nonmeltable dielectric film that is bonded to a carrier layer of a meltable material into a cylindrical configuration with overlapping edges, and bonding the overlapping edges to form the continuous circumferential wall of the tube.

15. The method according to claim 13, wherein step (a) comprises providing the tube with a wall thickness in the range from .003 to .009 inch.

16. The method according to claim 13, wherein step (b) comprises creating a vacuum in the tube and maintaining the vacuum while inserting the tube into the passage.

17. The method according to claim 16, wherein step (b) comprises relieving the vacuum within the tube after insertion and prior to step (c).

18. A method of installing windings in a slot passage within stator discs of an electrical motor, comprising:

(a) providing a dielectric film tube, the tube having a continuous circumferential side wall;

(b) applying a vacuum to the tube to cause the side wall of the tube to at least partially collapse; then

(c) while retaining the vacuum, inserting the tube into the passage; then

(d) relieving the vacuum in the tube and inserting windings into the tube.